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NEWS ROUNDUP

Despite indications that demand remains soft, **U.S. port expansion is briskly proceeding.** A trial run of one of the most sophisticated terminals ever built — A.T. Massey Coal Co.'s in Newport News, Va. — is scheduled for the end of this year, with the $122 million terminal scheduled to begin operation in April 1983. Massey and five other companies are also continuing plans for a $250 million terminal in Portsmouth, pledging more than $8 million for preconstruction environmental and engineering studies.

* * *

Ebasco Services Inc. announced plans for **a multi-billion dollar gasification and methanol complex in Panama** to convert midwestern U.S. coal into alternative fuels for Far East customers. The venture is the first of its kind for private developers in the international alternative fuels market. Scheduled for 1990 completion, the complex will cost an estimated $4.5 billion.

* * *

Wheelabrator-Frye Inc. and The Garrett Corp. have formed GWF Power Systems Co. to **design, build, own and operate small-to-medium-sized power plants.** The three to 50-megawatt facilities are aimed at a rapidly developing market resulting from utilities' restricted ability to build enough large power plants to meet electrical shortfalls expected in the 1980s and beyond, officials say.

* * *

Texas Energy Services Inc. **doubled its previously rejected bid** on a 445 million-ton federal coal reserve in Wyoming. The company's original $11.1 mil-

(Continued on page 2)

INSIDE

A NEW POLYMER — high property urethane elastomers (HPUEs) — from Mobay Chemical Corp. offers real potential for solving stickage, abrasion and corrosion problems, the company says. **Strategies on page 5.**

WORLD COAL USE could dramatically increase, but only if electricity plays a bigger role, predicts the International Energy Agency. **Story on page 6, Editorial on page 10.**

FEDERAL INSPECTORS have re-assumed enforcement in Virginia, and residents from mine operators to environmentalists are angry. **Story on back page.**

More Technology, Fewer Jobs

Recession May Force Industry Realignment

By Steve Marcy

WASHINGTON — A recovering U.S. economy will eventually hoist coal demand up with it — but not before the recession runs so deep for so long that jobs are permanently lost and the industry is restructured.

Some observers look for a shakeout as drastic as the late 1940s and 1950s when the railroads switched from steam to diesel-electric locomotives. That caused Appalachian coal mine employment to slip from about 500,000 to today's 150,000.

Others, including the United Mine Workers of America, see the prospect of job losses less bleakly. "We're concerned about it, but we don't subscribe to its inevitability," one UMW source told *Coal Industry News*.

Coal field unemployment stood at 22.7 percent in the quarter for July, August and September, according to the Bureau of Labor Statistics.

A further unemployment indicator, another observer says, is the number of self-contained self rescuers the Mine Safety and Health Administration has ordered the mines to have on hand. He notes the agency is requiring only 80,000 units when 115,000 units would be a more normal number to cover all underground workers.

Same Tough Decision

Facing the UMW in the middle of this decade, coal field lawyers and Wall Street analysts say, could be the same tough decision that faced its legendary president, John L. Lewis, after World War II: whether to negotiate for job security and spread the available wage pie among as many miners as possible, or ensure that a smaller number earn a decent wage. Lewis chose the latter.

It "decimated the region," recalls Davitt McAteer, a lawyer for the Center on Law and Public Policy, a law firm that has represented retired and disabled miners and their widows.

It was also the only real choice Lewis had, McAteer asserts. The other option was the course the British industry chose, which led to its near collapse.

A similar choice confronts the UMW today, but it derives more from the need to keep the U.S. coal industry competitive in a strong international market than it does from an imminent loss of business. Honing a competitive edge will likely require heavy new investment in job-displacing

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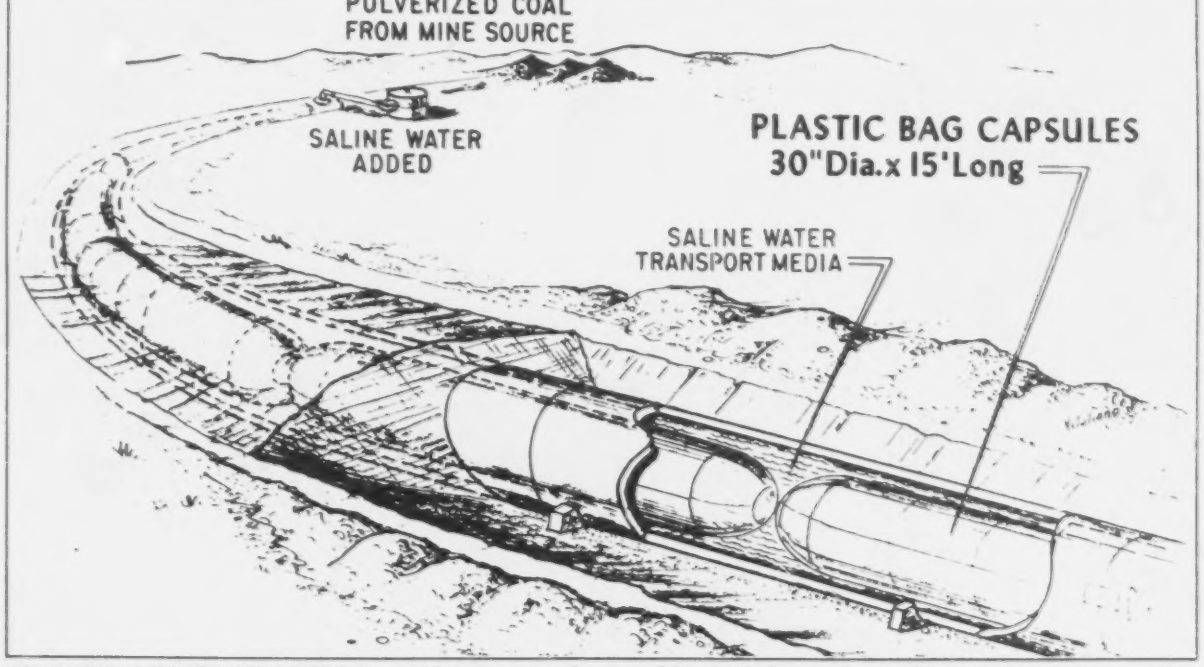


PROPOSED AQUATRAIN PIPELINE would transport coal wrapped in plastic bags using a saline solution. Project could potentially provide economical means of transport to West Coast ports while helping reduce salinity in the Colorado River.

Interior, Grace Evaluate New Transportation Scheme

WASHINGTON — Mineral waters near Glenwood Springs, Colo., could also cure an ailing segment of the western coal industry.

The Interior Department and W.R. Grace and Co. are investigating the feasibility of diverting 12,500 acre feet of saline water from the springs — a river tributary — to transport encapsulated coal to West Coast utilities and export points, then replenishing the draw-off with fresh water from supplies owned by Grace.

More than enough mineral water would remain for the region spa resorts.

The project could simultaneously alleviate two problems: inadequate transportation for northern Colorado's rich coal supplies and the salinity of the Colorado River. Federal law requires Interior to remove 2.8 million tons from the river by 2000. Using the 12,500 acre feet from Glenwood Springs to transport 10 million to 15 million tons of coal in 15-foot-long plastic bags could achieve 10 percent of that requirement.

Technical obstacles are possibly formidable and perhaps unknown — the largest plastic capsule moved so far has been a 10-inch long bag in experimental pipes at an Alberta research project.

Willing to Study Idea

But the federal agency is willing to invest $600,000 initially (of the $5 million earmarked for studying Colorado River desalination options) to look into the scheme.

The study is part of a memorandum of understanding to be signed between Interior and Aquatrain Inc., the W.R. Grace subsidiary that intends to recruit joint-venture partners, build and operate the pipeline.

Robert N. Broadbent, with the department's Bureau of Reclamation, said Interior will complete an exhaustive environmental impact statement costing close to $5 million and decide which of the four proposed routes — to northern California, southern California, the Gulf of California or the Gulf of Mexico — least damages the public lines the pipeline must cross.

Target construction date is between 1985 and 1987.

All this requires congressional authorization. Although no detailed administration plan has been sent to Capitol Hill, Broadbent says, "We've been talking to them quite a bit and they have a pretty good idea of what we're doing." He hopes authorization for the impact study can yet emerge in this Congress, which reconvenes Nov. 29 for a lame-duck session.

Possible Commitment

Interior's total commitment could lead to between a 5 percent and 10 percent equity

(Continued on page 4)

Coal Field Joblessness May Create Hardest Choices in Decades

(Continued from page 1)

mine technology.

Wall Street analyst Osman Eralp, who follows coal for Bache Halsey Stuart Shields, notes that the U.S. industry is one "with structural oversupply built into it." What has saved it so far and can continue to do so is its pre-eminent ability to use new technology, he maintains. "The U.S. must remain price-competitive in order to compete in the most important coal market — Europe, the one place where there will be incremental growth," Eralp says.

Retraining Key Element

Retraining miners for new industries is the only way to keep the entire Appalachian region economically viable, provided the mistakes of the Appalachian Regional Commission, set up by the Kennedy Administration in the early 1960s, are not repeated, Eralp says.

"(Retraining) must come from the bottom up, not the top down," Eralp says. "This is a resource-based industry in which you cannot transfer skills like you can from factory to factory — they are unique to it."

The ready transferance of mining skills to manufacturing and other industries was one of the mistaken assumptions that helped render the commission far less effective than the goals originally set out for it, the Bache analyst indicates.

"Look at coal industries around the world," Eralp challenges, "and you'll discover a much higher percentage of the employees in training programs of all types.

"The first thing is the training of labor, and subsequently the jobs came looking for the workers."

Lewis demanded during World War II, when the government ran the mines, a per-ton tax on coal to fund a health and benefits fund. Coal's dominance in the energy marketplace and in steelmaking ensured his war-time demands were met.

Suggests Similar Levy

McAteer suggests a similar levy today could benefit both mine workers and the industry, returning to the industry the dividends of a more highly skilled mine work force and former miners retrained in new skills that would attract new industry to share the area's tax burden.

The European coal industry has 15 percent to 20 percent of its employees training for new coal mining or alternative jobs at any one time. About 3 percent to 6 percent of U.S. coal miners undergo retraining.

McAteer says pressure could build in the coal fields to include increased job-protection benetits in the next wage agreement with the Bituminous Coal Operators in 1984. Eralp foresees that as a disaster.

"They (unions) can remain in the fight for money," Eralp says, "but the more they try to protect their jobs, the more they'll lose both jobs and money."

One coal industry source sees possible pressure for a job-protection push, but says the union might be willing to settle for a smaller wage increase in return for coal-company contributions to an increased jobless-benefits funds. "But that has to come from the other (union) side," he says.

A Youth Factor

The intensity of that pressure depends on the makeup of the work force. If it remains relatively young with a median age in the mid-20s, then "a lot of those fellows might be more concerned with what's in the weekly pay envelope," the industry source says. "It's when you're older that you become concerned with compensation and retirement benefits."

The job-protection issue will intensify in all labor relations during the 1980s, Eralp says, as more industries are forced to enhance productivity to maintain competitiveness in world markets.

He rates UMW resistance to productivity and technological improvement "somewhere in the middle category" among unions. Worst are newspaper pressmen. Best are auto workers.

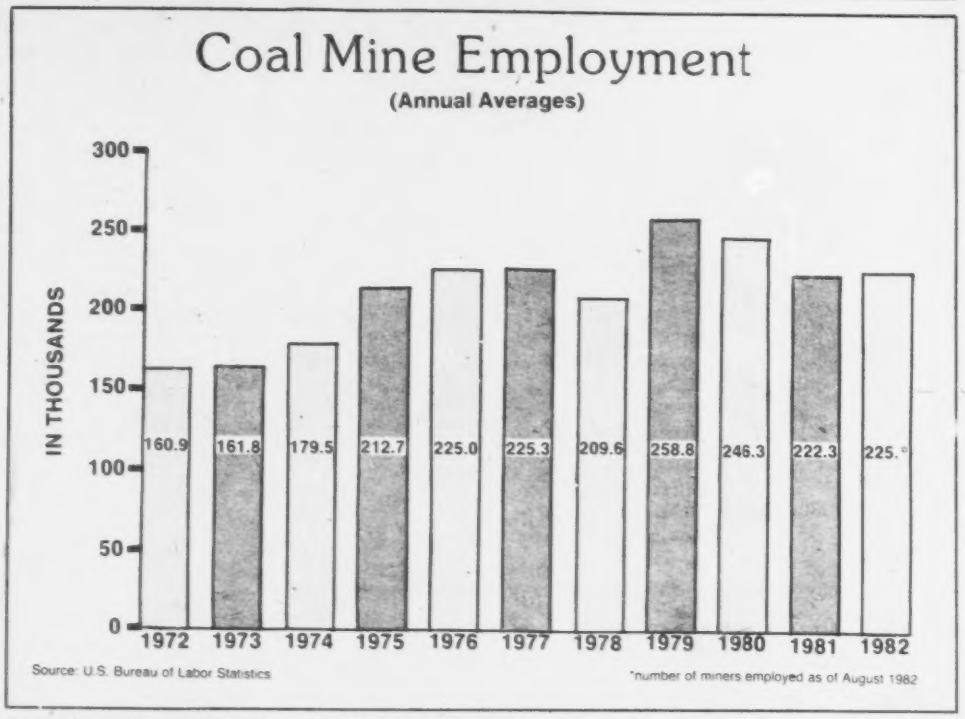
Worrying McAteer is a recession so virulent that miners drift to other regions despite the lack of jobs, erpding that hard core of middle-level, experienced workers who will be needed to run the more complex technology.

Movement has not happened on any thing like a massive scale so far; one office in the UMW's western district has recieved only 30 or 40 inquiries about work from miners moving from the East since spring.

One-Time Extravaganza

While there might be a shortage of experienced Appalachian miners in the middle of this decade, McAteer sees no long-term shift of production from the East. The bulk of the coal remains in that area. The phenomenal build-up of western mines during the 1970s is a one-time extravaganza as operators have followed the familiar pattern of extracting the cheapest coal. But like the British industry returning to Wales and the German industry returning to Essen, so too must the U.S. industry return to Appalachia's deep shafts.

"You'll never again see anything like Montana increasing its production from 1 million tons in 1972 to 30 million tons a few years later," McAteer says. "The capacity isn't there for that continued leaping expansion."



Former Deep Miners Proposing Surface Project near Seattle

BLACK DIAMOND, Wash. — An approximate $10 million investment by a group of local businessmen is expected to bring a $2 million coal mining payroll and some 90 new jobs to this small King County community near Seattle.

But the group will bring more than financing to the surface mining project that will have an annual 250,000-ton production capacity. All of the partners worked in the area's coal mines when they were younger. The group's president, David J. Morris, now a Denver resident but originally a Black Diamond native, is also a mining engineer.

Forty years ago, underground mines in the area produced some 1 million tons of coal yearly for Pacific Coast Coal Co. It will again become a producing company when the new mine opens, probably early in 1983.

Current mining activity in the area is confined to Palmer Coking Coal Co. which has a minimal surface operation producing 15,000 tons yearly. Several Palmer partners are among the new venture's backers, but the company itself will not be connected with the new mine.

Barry Kombol, an attorney and secretary of the group, told Coal Industry News that two years of exploration resulted in the decision to develop the new mine as two parallel open pits to tap the estimated 4 million to 5 million-ton reserve. He said the idea of opening a new mine has been discussed since 1974, when the area's last deep mine closed.

Conceding that no contracts have been signed, Kombol said that the group expects a number of state institutions to eventually become customers. Other potential customers include cement manufacturers and "some big industries," added Mine Superintendent Mark Abernathy.

He said that present plans call for mining some 10 to 15 acres a year, with an approximate 20 years of mine life based on an annual 250,000-ton projection. The coal to be mined "is some of the best available," he maintained.

Coal mining, which began in the area more than a century ago, has provided the best-known local attraction: The Flaming Geyser. An abandoned coal exploration hole drilled in 1911 continues to leak methane-charged water which, when lit, flares into a 12 to 15-foot flame. — T.W. Kienien

Colorado Mineral Waters are Considered Possible Western Transportation Medium

(Continued from page 1)

share in the $2 billion to $3 billion project.

It could also be as small as $70 million, the amount that Interior saline water transport manager Michael J. Clinton says some have estimated would be the cost of installing the pipes of the system. That's even cheaper than the $280 million projection for building an evaporative desliniztion unit.

"My fondest dream," Clinton says, "is that we could cut the red tape for industry and they take the salt water off our hands at no cost."

Much of the red tape for the project is wrapped around western water issues. The project must satisfy western laws that require replacement of any water transported out of the states.

Grace will do that from rights it owns to surface water from the Yampa River, itself a tributary to the Colorado. Charles Margolf, Grace's vice president for western coal development, says that the fresh water replacing the Colorado's saline water will come from a reservoir that will be built on a tributary to the Yampa.

Encapsulated coal will flow in this fresh water from near the mine site to Glenwood Springs, where coal bags will slip through a piping network into the saline water drawn from the mineral springs.

Key to the success of the contract is long-term contracts for all 10 million to 15 million tons that the pipleline can carry. Margolf says 2 million tons might be enough to get the project going. Unlike a coal slurry pipeline that must maintain a constant ratio of coal to water, bagged coal can be added as demand dictates.

Margolf says the interest is already out there; one Southwest utility has expressed the possibility of taking all of the pipeline's planned capacity.

Margolf says Aquatrain has talked to "40 or 50" potential joint venture partners, including one railroad which he declined to name. Potential partners had better include coal producers, Margolf says. Grace's Colorado mines cannot by themselves fill the pipeline's full planned capacity.

The Grace vice president doubts a fight from the railroads. The system would ship coal to markets and ports they cannot now serve, so no threat is posed to their existing traffic.

"States Have Stake"

Margolf also doubts federal eminent domain legislaion to condemn property for rights of way — like that now pending in Congress for coal slurry pipelines — would be needed. As he understands it, "the states have a large stake in reducing the Colorado's salinity. And those states already possess the right of eminent domain for public purposes."

Margolf hopes encapsulated coal could cut the $28 per ton cost of coal delivered by rail to Long Beach, Calif., for instance, by $10. "But it's too early to know if that's break-even or even realistic," he admits.

Energy Transportation Systems Inc.'s planned pipeline from Gillette, Wyo., to Arkansas is also about a $3 billion project, but is envisioned as moving twice the coal of Aquatrain.

Margolf concedes his per ton unit costs might be higher, but the Grace project could also likely include sophisticated prep plants that would produce a fuel much higher in BTUs per ton than ETSI's Powder River coal and virtually free of ash and sulfur content. A higher price could be commanded for this premium fuel.

A high degree of coal c[illegible] might also open the door [illegible] coal-fired electrical gen[illegible] California, something vi[illegible] possible presently with [illegible] tough air-quality stan[illegible]

Steve Marcy

FACTS & FIGURES

Domestic

	WEEKLY		
	10/9/82	10/2/82	10/10/81
Production			
Bituminous, recent week	16,186	16,267	18,710
Bituminous, year to date	**641,628**	**607,151**	—
Anthracite, recent week	89	123	109
Anthracite, year to date	**4,774**	**4,211**	—
Railroad carloadings			
Bituminous, recent week	111,183	119,236	133,640
Bituminous, year to date	**4,451,617**	**4,205,773**	—
Anthracite, recent week	137	296	444
Anthracite, year to date	**8,274**	**13,832**	—

Production data in thousands of short tons.
Source: U.S. Dept of Energy, Energy Information Administration—Weekly Coal Report.

	WEEKLY		
	10/9/82	10/2/82	10/10/81
Production by states, bituminous and lignite			
Eastern			
Alabama	523	511	656
Georgia	—	—	—
Illinois	1,204	1,229	1,604
Indiana	592	605	561
Kentucky:			
Eastern	2,132	2,175	2,741
Western	730	832	1,184
Total, Ky.	**2,862**	**3,007**	**3,925**
Maryland	79	81	74
Ohio	750	775	560
Pennsylvania	1,520	1,475	2,088
Tennessee	158	189	310
Virginia	770	794	1,180
West Virginia	2,526	2,421	2,680
Total, Eastern	**10,984**	**11,087**	**13,638**
Western			
Alaska	16	15	12
Arizona	217	208	215
Arkansas	4	4	10
Colorado	375	378	512
Iowa	12	11	15
Kansas	18	15	3
Missouri	99	104	119
Montana	553	643	710
New Mexico	345	340	340
North Dakota	365	345	295
Oklahoma	107	106	41
Texas	651	624	610
Utah	316	284	170
Washington	91	98	90
Wyoming	2,033	2,005	1,930
Total Western	**5,202**	**5,180**	**5,072**
Total, United States	**16,186**	**16,267**	**18,710**

In short tons (000).
Source: U.S. Dept of Energy, Energy Information administration—Weekly Coal Reports.

	MONTHLY		
	8/82	7/82	8/81
Coal Labor			
All employees			
Coal Mining	225.0	233.6	250.6
Bituminous & Lignite	221.7	230.3	247.0
Production employees			
Coal mining	182.5	190.5	207.0
Bituminous & Lignite	179.5	187.6	203.8
Hours, weekly average			
Coal mining	39.4	—	42.0
Bituminous & Lignite	39.4	—	42.0
Earnings, hourly average			
Coal mining	12.89	—	12.09
Bituminous & Lignite	12.93	—	12.13
Earnings, weekly average			
Coal mining	507.87	503.24	507.78
Bituminous & Lignite	509.44	503.49	509.46

Source: U.S. Dept. of Labor, Bureau of Labor Statistics—Employment and Earnings.

	MONTHLY		
	7/82	6/82	7/81
Bituminous and Lignite			
Consumption			
Electric power utilities	55,206	47,330	56,042
Coal user stocks of coal			
Electric power utilities	164,687	172,819	129,684
Anthracite			
Consumption			
Electric power utilities	108	94	102
Coal user stocks of coal			
Electric power utilities	5,658	5,603	5,269

Note: Data give in thousands of short tons.
Source: U.S. Dept. of Energy Information Administration—Weekly Coal Report.

	7/82	6/82	7/81
Coal User Production			
Major district users:			
Electric utilities			
(Mil Kwh.)			
Monthly	110,458	95,308	112,854

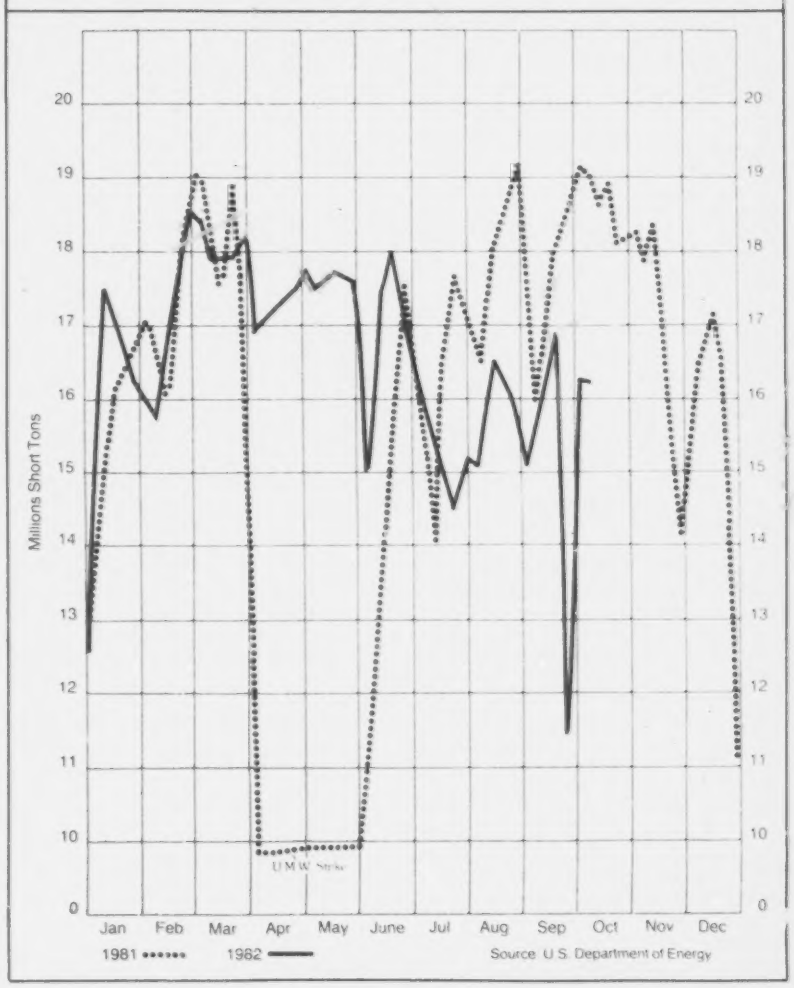
	MONTHLY		
Price Indexes	9/82	8/82	5/82
Bituminous Coal and Lignite	105.1	104.8	103.8
Primary Products	104.2	104.1	104.1
Prepared	104.7	104.4	103.4
Steam electric utilities	105.6	105.0	103.8
North Appalachia	104.2	104.8	102.3
Spot	116.4	98.9	93.5
Contract	102.5	105.7	103.6
South Appalachia			
Contract	98.7	98.0	98.1
Midwest	109.3	109.4	108.3
Contract	110.7	110.7	109.5
West	109.0	105.9	105.0
Contract	109.0	105.9	105.0
Metallurgical coke producer	101.8	102.7	101.3
High volatile	100.1	100.8	101.4
North Appalachia	97.2	98.8	99.7
Contract	97.2	98.9	99.8
South Appalachia			
Contract	101.7	102.0	102.5
West	100.7	100.1	99.4
Low volatile	103.5	105.7	101.3
North Appalachia			
Contract	104.7	103.8	98.7
South Appalachia			
Contract	103.5	107.3	102.7
All other industrial	100.3	101.8	101.7
North Appalachia			
Contract	N.A.	90.0	97.5
Midwest			
Contract	106.0	106.0	102.0
Unprepared (raw)	102.6	103.1	106.4
For preparation at other establishments	N.A.	N.A.	N.A.
For use without preparation	N.A.	N.A.	N.A.
Anthracite	153.8	153.8	154.4
Primary products	152.5	152.5	152.9
Prepared anthracite shipped	154.5	154.5	155.1
Stove	151.1	151.1	151.3
Chestnut	150.9	150.9	150.9
Pea	160.3	160.3	163.1
Buckwheat no. 1	149.0	149.0	149.0
Buckwheat no. 2	160.8	160.8	162.9
Buckwheat no. 4	143.9	143.9	143.9
Buckwheat no. 5	N.A.	112.0	112.0

N.A.—Not Available

Source: Bureau of Labor Statistics, Dept. of Labor.
Note: The Bureau of Labor Statistics has recalibrated its producer price index figures for bituminous and lignite, as well as reorganizing its pricing categories. The new index is based on a compilation of average prices for December, 1981, and that month appears as 100. The former index used June, 1976 prices as its base.

LATEST U.S. PRODUCTION

Estimated Bituminous Coal and Lignite



U.S. BITUMINOUS AND LIGNITE production for the week ending Oct. 9 was an estimated 16.2 million short tons, 81,000 short tons or 0.5 percent below the previous week's level. Production was also below the 18.7 million short tons posted the same week last year, according to the Department of Energy's Energy Information Administration. But EIA reported that production from Jan. 1 through Oct. 9, 1982, totaled 641.6 million short tons — 5.7 percent above cumulative production in the similar 1981 period.

Exports & Imports

	Quantity in short tons			Dollar Value		Avg. Value per short ton			
Bituminous coal, low volatile blends to make coke No. 5213110	8/82	7/82	8/81	8/82	7/82	8/81	8/82	7/82	8/81
Belgium	426,626	440,308	315,125	24,524,221	23,488,243	17,988,659	57.48	53.25	57.08
Brazil	460,590	364,123	263,609	21,214,597	17,328,880	17,008,726	46.05	47.59	64.52
Canada	301,872	515,529	623,250	20,010,990	32,670,593	37,295,598	66.28	53.86	60.93
France	110,834	351,564	673,880	7,046,840	18,938,220	37,710,920	63.58	53.86	55.96
Germany, F.R. (West)	22	—	173,924	1,200	—	10,096,345	54.54	—	58.05
Italy	499,224	708,007	726,781	23,519,483	36,398,937	41,942,336	47.11	51.41	57.71
Japan	1,546,292	1,914,694	2,020,573	91,817,191	111,855,656	116,604,337	59.37	58.41	57.71
Netherlands	147,331	288,146	253,674	8,762,671	17,129,211	10,840,164	59.47	59.44	42.73
Spain	411,103	194,118	435,358	16,853,902	10,079,947	25,822,518	127.96	40.99	59.31
Sweden	134,303	151,737	60,944	8,283,171	8,299,018	3,652,513	61.67	54.69	57.07
United Kingdom	213,012	99,251	—	13,569,625	113,520	—	63.70	56.25	—
Yugoslavia	49,252	35,962	153,812	2,600,906	2,348,988	8,638,599	52.80	65.31	56.16
Total, above	4,300,461	5,063,439	5,819,146	216,710,018	284,080,562	333,832,586	50.39	56.10	57.37
Total, other nations	292,499	943,805	728,866	39,085,537	48,592,123	42,742,316	133.62	51.48	58.64
Total, all nations	**4,592,960**	**6,007,244**	**6,548,012**	**255,795,555**	**332,672,685**	**376,575,002**	**55.69**	**54.84**	**57.51**

	Quantity in short tons			Dollar Value		Avg. Value per short ton			
Bituminous coal, others No. 5213120	8/82	7/82	8/81	8/82	7/82	8/81	8/82	7/82	8/81
Belgium	46,742	185,985	—	1,872,469	7,302,695	—	39.09	39.26	—
Canada	1,206,065	1,640,606	206,759	60,658,124	83,425,275	62,346,600	50.29	50.85	46.85
China, Taiwan	65,438	257,125	192,122	2,690,412	11,404,364	7,738,478	22.30	44.35	40.28
Denmark	125,983	296,062	218,767	6,275,563	15,058,028	9,942,180	49.81	50.86	45.45
Finland	106,445	79,523	136,326	4,995,302	3,507,667	6,972,443	46.92	44.10	51.15
France	461,452	257,702	435,179	21,291,329	11,724,139	17,647,530	46.13	45.49	40.55
Germany, F.R. (West)	95,199	123,123	261,335	5,910,319	6,870,828	12,701,846	62.08	55.80	48.60
Italy	164,506	259,954	206,759	9,545,807	12,505,621	9,921,083	58.02	48.10	47.98
Japan	178,959	144,027	211,655	9,476,954	12,505,621	11,285,972	52.95	52.73	53.32
Netherlands	423,425	261,466	714,209	20,833,595	12,207,200	37,044,974	49.20	46.68	51.87
Spain	200,817	167,018	392,053	9,411,329	8,329,467	17,060,081	46.86	49.87	43.51
Total, above	3,075,031	3,672,591	4,131,749	152,916,203	179,930,941	194,603,836	49.72	48.99	47.10
Total, other nations	182,917	6,307	354,251	10,045,818	304,004	15,724,550	54.92	48.28	44.39
Total, all nations	**3,257,948**	**3,678,898**	**4,486,000**	**162,962,021**	**180,235,443**	**210,328,388**	**50.01**	**48.99**	**46.89**
Lignite No. 5213130									
Total, all nations	**5,313**	**5,022**	**3,701**	**316,275**	**673,944**	**1,011,007**	**59.52**	**51.78**	**125.98**
Coal coke for use as fuel No. 5213148									
Total, all nations	**55,023**	**123,818**	**53,827**	**4,995,532**	**6,411,373**	**3,482,014**	**90.78**	**51.78**	**64.69**
Petroleum coke, except calcined No. 5213150									
Canada	2,888	40,597	—	106,787	2,053,250	—	36.97	50.57	—
Japan	288,270	101,991	182,294	13,839,833	4,794,368	8,618,078	48.00	47.00	47.28
Netherlands	97,442	160,576	—	5,321,550	8,651,176	—	54.61	53.87	—
Total, above	388,600	303,164	234,209	19,268,170	15,498,794	11,969,494	49.58	51.12	51.11
Total, other nations	343,899	476,762	452,613	12,687,952	18,276,000	22,919,175	36.89	38.33	48.62
Total, all nations	**732,499**	**779,926**	**686,822**	**31,956,122**	**33,774,794**	**34,888,669**	**43.62**	**43.30**	**50.80**
Compositions for fuel No. 5213160									
Total, all nations	**813**	**63**	**41**	**85,524**	**24,089**	**17,647**	**105.19**	**382.36**	**430.17**
Anthracite No. 5213170									
Korea Rep. (South)	72,788	38,608	190,770	2,327,537	1,256,500	6,212,769	31.97	32.54	32.57
Total, all nations	**88,339**	**105,697**	**190,770**	**3,485,349**	**6,696,122**	**6,212,769**	**40.36**	**63.35**	**32.57**